

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY CONTROL MINOR PERMIT

Permit AQ0264MSS05

Preliminary – November 20, 2009

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit AQ0264MSS05 to the Permittee listed below.

Operator and Permittee: **United States Air Force (USAF)**
2310 Central Avenue, Suite 100
Eielson Air Force Base, AK 99702-2299

Owner: Same as Permittee

Stationary Source Eielson Air Force Base

Location: Latitude: 64° 41' N; Longitude: 147° 05' W

Physical Address: 23 Road Miles South of Fairbanks, Alaska, along Richardson Hwy,
Eielson Air Force Base, Alaska, 99072-2299

Permit Contact: Katherine Stringham, (907) 377 3311

Project: Central Heating and Power Plant Boiler Replacement Project

This permit establishes an Owner Requested Limit (ORL) under 18 AAC 50.508(5) to avoid classification under 18 AAC 50.502(c) (3) and 40 CFR 52.21(b) (23) (i). The permit satisfies the obligation of the Permittee to obtain a minor permit under 18 AAC 50.

This permit authorizes the Permittee to operate under the terms and conditions of this permit, and as described in the original permit application and subsequent application supplements listed in 0 except as specified in this permit.

The Permittee may operate under the terms and conditions of this minor permit upon issuance.

John F. Kuterbach
Manager, Air Permits Program

Clean Air

Table of Contents

<u>Section 1.</u>	<u>Emission Unit Inventory</u>	3
<u>Section 2.</u>	<u>Continuous Emissions & Continuous Opacity Monitoring</u>	2
<u>Section 3.</u>	<u>Owner Requested Limit to Avoid Project Classification Under 18 AAC</u> <u>50.502(c)(3) and 40 CFR 52.21(b)(23)(i)</u>	5
<u>Section 4.</u>	<u>General Recordkeeping, Certification, and Information Requirements</u>	8
<u>Section 5.</u>	<u>Standard Conditions</u>	9
<u>Section 6.</u>	<u>Permit Documentation</u>	10

Section 1. Emission Unit Inventory

- 1. Emission Units (EU) Authorization.** Emission units listed in Table 1 have specific monitoring, record keeping, or reporting conditions in this permit. Except as noted elsewhere in the permit, the information in Table 1 is for information purposes only. The specific unit descriptions do not restrict the Permittee from replacing an emission unit identified in Table 1. The Permittee shall comply with all applicable provisions of AS 46.14 and 18 AAC 50 when installing a replacement emission unit, including any applicable minor or construction permit requirements.

Table 1: Minor Permit AQ0264MSS05 Emission Unit Inventory

EU ID	Description	Make/Model	Rating/Size	Fuel Type	Install Date
1A	Replacement Boiler	To be determined	120,000 lb steam/hr	Coal	2019
2A	Replacement Boiler	To be determined	120,000 lb steam/hr	Coal	2018
4A	Replacement Boiler	To be determined	120,000 lb steam/hr	Coal	2016
5A	Replacement Boiler	To be determined	120,000 lb steam/hr	Coal	2015
6A	Replacement Boiler	To be determined	120,000 lb steam/hr	Coal	2013

- 2. Replacement Schedule.** The Permittee shall remove the existing boilers (1, 2, 3, 4, 5, 6) and replace with the new boilers (1A, 2A, 4A, 5A, 6A) as specified in Table 2.

Table 2 Order of Replacing Existing Boilers with New Boilers

Replacement Stage	Boilers in use at start of Stage	Existing Boiler Removed	Replacement Boiler Added	Boilers in use at end of Stage
1	1, 2, 3, 4, 5, 6	6	6A	1, 2, 3, 4, 5, 6A
2	1, 2, 3, 4, 5, 6A	5	5A	1, 2, 3, 4, 6A, 5A
3	1, 2, 3, 4, 6A, 5A	4	4A	1, 2, 3, 6A, 5A, 4A
4	1, 2, 3, 6A, 5A, 4A	2	2A	1, 3, 6A, 5A, 4A, 2A
5	1, 3, 6A, 5A, 4A, 2A	1	1A	3, 6A, 5A, 4A, 2A, 1A
Completed	3, 6A, 5A, 4A, 2A, 1A	3	None	6A, 5A, 4A, 2A, 1A

- 2.1** Notify the Department within seven days of installing a replacement unit. The notification must identify:
- unit number and serial number of the replacement emission unit;
 - unit number and serial number of the existing emission unit replaced;
 - make, model, and rating of the replacement emission unit;
 - make, model, and rating of the existing emission unit replaced;
 - removal date of a replaced emission unit
 - installation / modification date; and
 - anticipated initial start-up date of a replacement emission unit.

Section 2. Continuous Emission & Continuous Opacity Monitoring

- 3. CEMS and COMS requirements.** For each replacement boiler, the Permittee shall install, calibrate, maintain, and operate a Continuous Emission Monitoring System (CEMS) for measuring concentrations and emissions of oxides of nitrogen (NO_x), carbon monoxide (CO), and oxides of sulfur (SO_x) discharged to the atmosphere and record the output of the system. The Permittee shall install, calibrate, maintain, and operate a Continuous Opacity Monitoring System (COMS) for measuring the opacity of emissions discharged to the atmosphere and record the output of the system.
- 3.1 For NO_x monitoring and recording, the Permittee shall install, calibrate, maintain, and operate the CEMS as described in 40 CFR 60, Subpart Db, §60.48b.
 - 3.2 For CO monitoring and recording, the Permittee shall install, calibrate, maintain, and operate the CEMS as described in Performance Specifications PS-4A in Appendix B to 40 CFR Part 60 (Appendices).
 - 3.3 For SO_x monitoring and recording, the Permittee shall install, calibrate, maintain, and operate the CEMS as described in 40 CFR 60, Subpart Db, §60.47b.
 - 3.4 For opacity monitoring and recording, the Permittee shall install, calibrate, maintain, and operate the COMS as described in 40 CFR 60, Subpart Db, §60.48b(a).

Section 3. Owner Requested Limit to Avoid Project Classification Under 18 AAC 50.502(c) (3) and 40 CFR 52.21(b) (23) (i)

- 4. Coal Consumption Limit.** The Permittee shall limit coal consumption as indicated in Table 3. For the replacement boilers (Units 1A through 6A), monitor, record, and report coal consumption as indicated in Condition 0. For existing boilers (Units 1 through 6), comply with monitoring, recordkeeping, and reporting (MR&R) requirements as described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC except as specified in this permit.

Table 3: Coal Combustion Limits by Stage and Emission Units (TPY)

Project Stage	Emission Unit (Boilers)	Tons of Coal Burned per 12 consecutive months
1	1, 2, 3, 4, 5	161,374
	1, 2, 3, 4, 5, 6A	220,000
2	1, 2, 3, 4	142,074
	1, 2, 3, 4, 5A, 6A	220,000
3	1, 2, 3	112,641
	1, 2, 3, 4A, 5A, 6A	220,000
4	1, 3	74,545
	1, 2A, 3, 4A, 5A, 6A	220,000
5	3	99,400
	3, 1A, 2A, 4A, 5A, 6A	NTE tons that when burned emit 551 tons CO
6	1A, 2A, 4A, 5A, 6A	NTE tons that when burned emit 551 tons CO

4.1 Monitor; record and report coal consumption as follows:

- Track, calculate, and record the tons of coal burned every calendar month in each emission unit listed in Table 3, tons of coal burned in all emission units listed in Table 3 during the calendar month, and tons of coal burned in all emission units listed in Table 3 during the preceding 12 consecutive calendar months.
- Include the records described in condition 0 with the operating report described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50.
- If the tons of coal burned in all emission units during a 12 consecutive month period exceed the limits specified in Table 3, submit an excess emission report to the Department as described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50

- 5. CO Emissions:** The Permittee shall limit CO emissions to 551 tons per 12 consecutive months for all stages. Monitor; record and report as follows:

- 5.1** Monitor and record CO emissions from applicable replacement units 1A, 2A, 4A, 5A, and 6A with the CEMS as described in Condition 0.

- 5.2 Calculate and record CO emissions from each boiler in use. For the replacement boilers (emission units 1A through 6A), use the CEMS to calculate and record the CO emissions daily. For existing boilers (emission units 1 through 6), multiply the tons of coal burned with an emission factor to calculate and record CO emissions monthly.
- 5.3 Include the records described in condition 0 and 0 with the operating report described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50.
- 5.4 If the CO emissions for all boilers used during the preceding 12 consecutive months exceed 551 tons, submit an excess emission report to the Department as described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50.
6. **SO_x Emission Controls for Replacement Boilers.** The Permittee shall install, calibrate, maintain, and operate an emission control system that reduces SO_x emissions by at least 50 percent on each replacement boiler. The Permittee shall:
 - 6.1 estimate the SO_x control efficiency of each replacement boiler monthly with the flow of SO_x into and out of the control equipment;
 - 6.2 record the SO_x control efficiency of each replacement boiler monthly;
 - 6.3 report the SO_x control efficiency of each replacement boiler with the operating report described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50; and
 - 6.4 if the SO_x control efficiency of any replacement boiler is less than 50% OR the concentration of SO_x in the exhaust of a replacement boiler exceeds 500 ppmv SO_x, submit an emission report to the Department as described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50.
7. **NO_x Emission Controls for Replacement Boilers** The Permittee shall install, calibrate, maintain, and operate an emission control system that reduces NO_x emissions by at least 65 percent on each replacement boiler. The Permittee shall:
 - 7.1 estimate the NO_x control efficiency of each replacement boiler monthly with the flow of NO_x into and out of the control equipment;
 - 7.2 record the NO_x control efficiency of each replacement boiler monthly; and
 - 7.3 report the NO_x control efficiency of each replacement boiler with the operating report described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50; and
 - 7.4 if the NO_x control efficiency of any replacement boiler is less than 65 percent, submit an excess emission report to the Department as described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50.

8. Particulate Matter Emission Control for Boilers: The Permittee shall install a baghouse on each boiler to control particulate matter (PM).

- 8.1 PM emitted from the replacement boilers (Emission Unit 1A through 6A) shall not exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours;
- 8.2 Visible emissions in a boiler exhaust, excluding condensed water vapor, shall not reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes;
- 8.3 For replacement boilers (Emission Units 1A through 6A), comply with opacity monitoring and recording described in Condition 0
- 8.4 For existing boilers (Units 1 through 6), comply with visibility monitoring, recordkeeping, and reporting (MR&R) requirements as described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC except as specified in this permit;
- 8.5 Report excess visible emissions with the operating report described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50.

Section 4. General Recordkeeping, Certification, & Information Requirements

- 9. Certification.** The Permittee shall certify any permit application, report, affirmation, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: “Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.” Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.
- 9.1 The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if
- a. a certifying authority registered under AS 09.25.510 verifies that the electronic signature is authentic; and
 - b. the person providing the electronic signature has made an agreement, with the certifying authority described in Condition 0, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.
- 10. Information Requests.** The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the federal administrator.

Section 5. Standard Conditions

- 11.** The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for
 - 11.1** an enforcement action; or
 - 11.2** permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.
- 12.** It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.
- 13.** Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.
- 14.** The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- 15.** The permit does not convey any property rights of any sort, nor any exclusive privilege.

Section 6. Permit Documentation

July 24, 2009 Minor Permit application for the Central Heat & Power Plant at Eielson AFB

November 17, 2009 In an email to Sally Ryan of ADEC, Katherine Stringham of USAF rescinded USAF's request for the Department to administratively amend the existing Title V permit.